

FISH MORTALITY IN THE GULF OF MEXICO.

By M. A. MOORE.

BRAIDENTOWN P. O., MANATEE COUNTY, FLORIDA,

November 30, 1880.

SIR: I hope you will excuse the liberty I take in writing you this letter, but on yesterday Maj. W. I. Turner gave me a blank circular of yours and asked me to fill out the queries for him, which I did, and thought no more of it at the time. But on thinking the matter over I have come to the conclusion that there is a matter here that might be of some interest to your commission, as it is one of most vital importance to many here.

You are doubtless aware that we have employed here a number of vessels as fishing-smacks, ranging from 30 to 50 tons, whose vocation it is to carry live fish to the Cuban markets. This industry provides occupation and subsistence for a large portion of our population in South Florida.

About two years ago certain portions of our Gulf waters became poisoned in some way that caused the death of all the fish that came in contact with it. Whenever a smack with a full fare, *i. e.*, a full cargo of fine healthy fish in her well, sailed into this poisoned water every fish would die, and they would have to be thrown away. This compelled the vessel to return to fishing, at the loss of a month's hard work.

This state of affairs has occurred again; the waters of some portions of the Gulf becoming so noxious as to kill the fish. The poison seems to be confined to certain localities and currents for the time being, as sometimes this state of affairs is observed more marked at one place and sometimes at another. However, there seems to be more of it about the mouth of Charlotte Harbor and off Punta Rassa than elsewhere.

When this condition of water prevails, the surface of the water is covered with dead fish, and the beach is covered with them in such numbers that sometimes the stench is intolerable. During its prevalence two years ago the military commander at Fort Jefferson on the Tortugas had to make daily details to carry off the dead fish thrown up on the beach for fear it would breed a pestilence.

I live immediately on the beach of Palma Sola Bay, and some two weeks ago the beach was covered with dead fish. The only thing that seems to be inexplicable is that this water seems to affect what are termed here bottom-fish more than any others. The principal game of the fishing-smack are the grouper (*Serranus nigrilis*), and the snapper (*Serranus erythrogaster*). These, with the perch, king-fish, trout, and all those fish which take the hooks seem to be much more affected than the mullet (*Mugil lineatus*), or the pompano (*Bothrolasmus pampanus*). In our parlance here fish that take the hook are called bottom-fish in contra-

distinction from those that go in schools and are taken with the net, and the bottom-fish seem to be more affected by this water than the others. Numbers of sharks and rays, eels and catfish are thrown up dead on the beach.

I am not aware that there has been any report of this matter made to your commission, or any attempt made at the analysis of the water, and would not have taken the liberty of writing, save for the fact that the greater part of our fishermen are comparatively illiterate. My own opinion is that the state and condition of the water are caused by some volcanic action at the bottom. I may be wrong in my technical names of the fish, but our fish have never been properly classified, and I give you the best I can do.

With a renewed apology for the liberty I have taken, I remain, most respectfully,

M. A. MOORE.

Professor BAIRD,

Commissioner of Fish and Fisheries, Washington, D. C.

ON THE DESTRUCTION OF FISH BY POLLUTED WATERS IN THE GULF OF MEXICO.

By W. C. W. GLAZIER, Assistant Surgeon, M. H. S.

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL
UNITED STATES MARINE HOSPITAL SERVICE,
Washington, D. C., December 7, 1880.

SIR: I have the honor to transmit herewith copy of a letter received on the 3d instant from Assistant Surgeon W. C. W. Glazier, of this service, now on duty at Key West, which it was thought might be of interest to you.

Very respectfully,

JOHN B. HAMILTON,

Surgeon-General U. S. Marine Hospital Service.

Prof. S. F. BAIRD,

Commissioner of Fish and Fisheries, Washington, D. C.

UNITED STATES MARINE HOSPITAL SERVICE,
DISTRICT OF THE GULF, PORT OF KEY WEST, FLA.,
Surgeon's Office, November 25, 1880.

SIR: I have the honor to report, as a matter of scientific interest, that it has occurred several times that fishermen returning from the coast of Florida with fish, in an apartment of their boats communicating freely with the surrounding water, have had them die suddenly on reaching a certain kind of water distinguishable by its color. This has